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In the Claims:

Please amend claim 17. The claims are as follows.

1-16. (Canceled)

17. (Currently amended) A method of selecting a specific precise resistance in a programmable element that comprises a semiconductor material, said method comprising the steps of:

doping [[a]] the semiconductor material with a dopant that decreases said resistance when said element is exposed to actinic radiation, said radiation causing substantially no mechanical deformation of said element;

exposing said programmable element to said actinic radiation for a first length of time;

determining a test resistance value of said programmable element;

comparing said test resistance value to said specific precise resistance; and

if said test resistance value does not equal said specific precise resistance, exposing said programmable element to said actinic radiation for said first length of time and repeating said steps of determining and comparing said resistance values.

18. (Previously presented) The method of claim 18, wherein the method further comprises the step of forming a layer on the semiconductor material, wherein the layer comprises a cap portion that includes an insulative material such that the cap portion is in direct mechanical contact with the semiconductor material, and wherein during each said exposing the actinic radiation strikes

an uncovered surface of the cap portion, passes through the insulative material of the cap portion, and propagates into the programmable element.

19. (Previously presented) The method of claim 18, wherein the doping step is performed before the step of forming a layer.

20. (Previously presented) The method of claim 18, wherein the doping step is performed after the step of forming a layer.

21. (Previously presented) The method of claim 18, wherein the cap portion of the layer includes silicon dioxide.

22. (Previously presented) The method of claim 18, wherein the cap portion of the layer includes silicon nitride.

23. (Previously presented) The method of claim 18, wherein the step of forming a layer includes forming a conductive contact within the layer such that the contact is in direct mechanical contact with the cap portion and with the semiconductor substrate.

24. (Previously presented) The method of claim 17, wherein actinic radiation is laser radiation, and wherein each said exposing comprises exposing said programmable element with said laser radiation for said first length of time which results in heating said programmable element to an

elevated temperature.

25. (Previously presented) The method of claim 24, wherein after said comparing determines that the resistance value equals said specific precise resistance, the method further comprises rapidly cooling the programmable element from the elevated temperature to an operating temperature.

26. (Previously presented) The method of claim 17, wherein the providing step includes providing shall trench isolation within the semiconductor material for isolating the programmable element within the semiconductor material.

27. (Previously presented) A method for programming a programmable element, comprising the steps of:

providing a semiconductor substrate having a semiconductor material therein, wherein the semiconductor substrate includes a programmable element region having the programmable element, and wherein the programmable element comprises the semiconductor material;

doping the programmable element in the programmable element region with a dopant;

forming a layer on the semiconductor substrate, wherein the layer comprises a cap portion that includes an insulative material, and wherein the cap portion is in direct mechanical contact with the semiconductor substrate;

heating the programmable element with laser radiation to an elevated temperature such that the dopant is activated so as to cause an electrical resistance of the programmable element to decrease, wherein the laser radiation strikes an uncovered surface of the cap portion, passes

through the insulative material of the cap portion, and propagates into the programmable element region such that the laser radiation causes substantially no mechanical deformation of the programmable element.

28. (Previously presented) The method of claim 27, wherein the doping step is performed before the step of forming a layer.

29. (Previously presented) The method of claim 27, wherein the doping step is performed after the step of forming a layer.

30. (Previously presented) The method of claim 27, wherein the laser radiation has a wavelength in a range of 248 nanometers to 1107 nanometers.

31. (Previously presented) The method of claim 27, wherein the laser radiation has a wavelength such that the laser radiation is essentially unabsorbed by the cap portion of the layer.

32. (Previously presented) The method of claim 27, wherein the cap portion of the layer includes silicon dioxide.

33. (Previously presented) The method of claim 27, wherein the cap portion of the layer includes silicon nitride.

34. (Previously presented) The method of claim 27, wherein the method further comprises rapidly cooling the programmable element from the elevated temperature to an operating temperature.

35. (Previously presented) The method of claim 27, wherein the step of forming a layer includes forming a conductive contact within the layer, wherein the conductive contact is in direct mechanical contact with the cap portion and with the semiconductor substrate.

36. (Previously presented) The method of claim 27, wherein the providing step includes providing shall trench isolation within the semiconductor substrate for isolating the programmable element region within the semiconductor substrate.